

BEJEL*

BY

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DR. HUDSON said that he felt that the Society was showing a great breadth of interest in arranging a meeting on the subject of bejel; because bejel, though a spirochaetal infection, was principally acquired in childhood and was essentially non-

In order to give the Society some idea of the survey which he had undertaken, he showed a number of maps of the Near and Middle East. The central portion of the kingdom of Iraq comprised a great deal of desert; the northern portion was somewhat

mountainous, whereas the terrain in the south was level and marshy (see Figure). In this area toward the Persian Gulf, hundreds of square miles were covered with water all the year round, and yet other areas were flooded every spring. The bejel project was organized by the World Health Organization (WHO) with the financial assistance of the United Nations International Children's Emergency Fund (UNICEF). When Dr. Hudson directed this project at the suggestion of WHO, and at the request of the Government of Iraq, he had found himself, therefore, guiding a three-horse team. He took up residence in Baghdad in October, 1950, and after some preliminary work in organizing the team and assembling the equipment, field work was started on January 1, 1951. The first two months were spent on the River Euphrates in the central portion of the country, and during the last week of this period they went out for some days of work among the nomads of the western desert. March, April, and part of May were spent in the

marsh country to the south. Then the team returned to the first area to check on their work, and about June 1 began work on the River Tigris, near Mosul in the north. Thus the survey part of the project was carried out at three widely separated, contrasting points, each representative of a certain terrain.

Dr. Hudson had left Iraq in mid-June but the field team was to continue in the north until about July 1, and then move into the city of Baghdad. It was expected that a V.D. clinic would be organized during the summer, under the expert guidance of

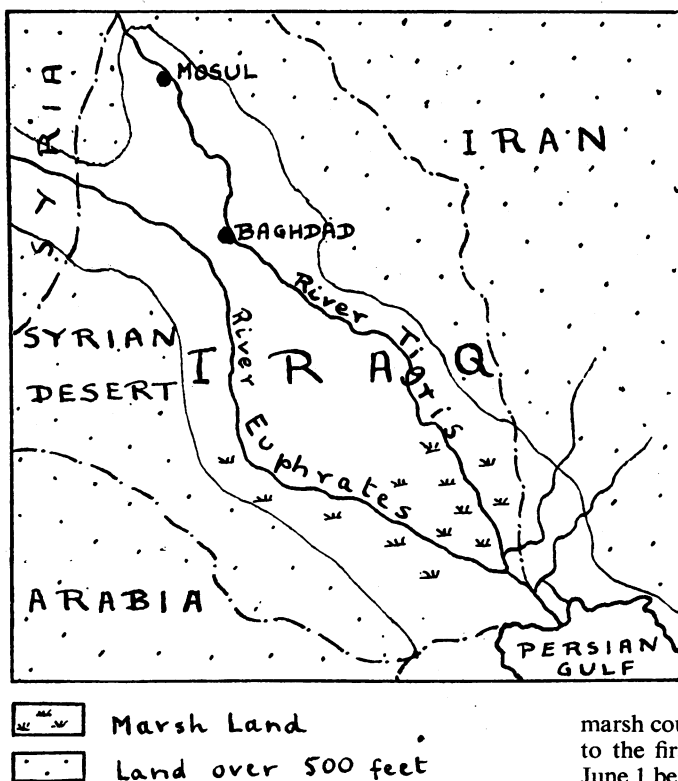


FIGURE.—Sketch-map of Iraq to show positions of places named.

venereal in character. It occurred endemically among the Arabs of the Near East, particularly in Syria and Iraq, and was called not only *bejel*, but also *bishal* and *belesh*.

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Dr. George W. Csonka of St. Mary's Hospital, London, who had succeeded Dr. Hudson as adviser to the project.

The work of the field team was associated with a laboratory in Baghdad, built by the Iraq Government as part of their commitment, and equipped by UNICEF. The staff comprised British, Dutch, French, Finnish, and American personnel, and Iraq furnished not only doctors and nurses but many other types of employees.

During the six months of field work they had obtained between 5,000 and 6,000 records of patients suffering from bejel infection. These were not large figures, but one had to remember the difficulties in dealing with an Arab society. The principal hazards to life were first malaria, second schistosomiasis, and third perhaps bejel. Especially common in the marsh-dwellers were bloody urine, enlarged spleen, anaemia, and gummata of bones and skin.

A brief indication was given of the results of the survey. On the Middle Euphrates they found in a certain village 358 people of whom 37 per cent. were sero-positive. In three villages situated close to each other 356 people were examined, of whom 55.6 per cent. were sero-positive. Among the nomad tribes, they examined the blood of 105 men, women, and children, and found 37 per cent. to be sero-positive. At other places the percentages were higher, rising at one place to 63 per cent. and in the marshes to 81 per cent. It might be said that these cases were selected, and in a sense they were. But the team was treating people with all kinds of diseases, and the people came forward with whatever they might be suffering from, so that selection was not such a great factor.

An analysis was made of 2,459 patients seen in the Amara or southern district, and it was found that 71 per cent. of those who had given a past history of the complaint, though they had no signs or symptoms, were sero-positive. In other words, a patient's statement that he had had this disease in the past was supported by a positive serum reaction in about three-fourths of the cases. Many of the older people had evidently had plenty of time to become sero-negative since their childhood infections. It was felt that their recognition of the disease was almost 100 per cent. reliable. There were critics who were sceptical of this and who thought that scabies and impetigo had been mistaken for bejel, but it seemed that the Arab was pretty accurate when he said that he had had bejel.

The cases with signs and symptoms in this series gave a proportion of positive serum reactions up to 91 per cent. A history of venereal infection was found in only nine of these patients, one of

whom had had gonorrhoea. One had to appreciate the fact that there was almost no gonorrhoea among these people; the team looked for it and did not find it. Sometimes the accusation was made that they were trying to idealize the Arab. That was based on a misunderstanding; the Arab would be just as promiscuous in his sex relationships as other peoples—perhaps more so—if only he had the opportunity; but his social fabric was so constructed that his opportunities for promiscuous intercourse were limited. Since the Arabs believed that women had no moral sense, no woman was allowed real freedom. Each was under the care and supervision of some man, if not her husband, then her father or her brother. Further, everybody lived in "glass houses" and it was difficult in such a community to achieve clandestine promiscuity. Of course, a man could change his wife, he could send his wife back to her father without much formality and get another, or even more than one.

Many of these people on being questioned said that they had "not yet" had bejel, but they obviously expected to get it some time or other. They conveyed by their manner that the disease was of no particular consequence, something which everyone might expect to get at some time. Of sixty people who said they had not yet had it, two-thirds were found to have negative serum reactions. Of 43 people who said that they had had it, 91 per cent. had positive serum reactions. Of 191 who said they had had it "a long time ago", 58 per cent. were sero-positive. Of 42 who were uncertain about it, about half had positive serum reactions. How could one explain the positive reactions occurring in those who said they had not yet had the disease? Had their parents failed to tell them, or was it possible that they could become sero-positive without any clinical signs?

A question might be asked about the effect of the infection upon the cardiovascular system and central nervous system. The x-ray work in connexion with the survey had not yet been started, so no radiographs were available, but the team had the impression that bejel did not produce aneurysm or other cardiovascular pathology; nor was there evidence of treponemal disease of the central nervous system. As to the effect of maternal seropositivity on the foetus, they compared 100 women who were sero-positive with 92 who were sero-negative, and found that those who were sero-positive had a slightly higher percentage of living children than those who were sero-negative. The sero-positive women averaged slightly fewer miscarriages than the sero-negative. Dr. Hudson assured his audience that he did not advocate bejel as a protection to the newborn, but they did

infer from these observations that, so far as this village population was concerned, it made no difference to the foetus whether the mother's serum reaction was positive or negative.

Dr. Hudson described the extensive series of Kahn and other tests, which were carried out on a total of 4,472 samples of blood in 5 months. An enormous amount of work was done by the serologists, and for help they had only untrained boys who had to be taught how to wash glassware and perform similar activities. Dr. Tuomioja of Finland, the chief serologist, reported that among his positive reactions he obtained a larger proportion of low titres than would be expected in a series of syphilitic patients. It was not possible to see any difference in the serological results whether the blood samples were taken in a malarious area or not.

As for leprosy, the Government policy was to segregate lepers. The team came upon a few who were still at large, but the number encountered was not large enough to be of importance in this series. It was interesting in this connexion to recall that in the Dark and Middle Ages the word "leprosy" was used as a generic term for chronic ulcerative disease and might well have included such manifestations as bejel. The team found an isolated town where to-day bejel is still called *jirdam*, the Arab name for leprosy. In another area bejel was called *lowath* (literal translation, unclean), reminding one of the ancient lepers with clappers and bells, crying "Unclean, unclean !".

Bejel was a disease which no one in Iraq had

taken very seriously. Even those who had it often took it lightly. Most of the medical men of Iraq described it as "just syphilis" and usually regarded it as congenital in nature. The team found bejel to be common among the children of rural areas, the early muco-cutaneous eruption usually lasting about a year. Older people exhibited late lesions of gummatous nature, mostly in bones and skin, and complained of headaches, pains in the bones, ulcers, and disability. Though not a direct cause of death in many cases, bejel certainly caused a great deal of suffering, physical handicap, and economic loss. In the province of Dulaim with a total population of 193,000, the rural villagers numbered about 131,000. In the province of Amara with a population over 300,000, five-sixths of the people were rural. One might estimate conservatively that there were 250,000 people in the whole of Iraq who needed treatment for treponematoses, either bejel or venereal syphilis, and the number who were sero-positive might be double that figure. If one went a little further and took in those now living who were going to have bejel at some time or other in their lives, the total figure might well be a million.

The ideal programme for the suppression of this disease would not be very difficult to set up. It was easy to diagnose, and treatment by penicillin was standardized as to dose and was practically free from danger of reaction. There were ways of getting around the obvious geographical difficulties. What was particularly needed were enthusiastic doctors, sufficiently scientific and humanitarian in outlook.

DISCUSSION

DR. R. R. WILLCOX said that it had been a singular pleasure to listen to Dr. Hudson because he himself had been concerned with the WHO Bejel Project at the early blue-print stage, since which time Dr. Hudson had been extraordinarily kind in sending him reports at regular intervals. In the letters accompanying these reports Dr. Hudson had said that he was "writing from the saddle", but he had now come off it and had presented a most fascinating picture.

When Dr. Willcox visited Iraq he was struck by the frequency of angular stomatitis, and this to a considerable extent appeared to confuse the diagnosis. He was confronted with the same problem in Africa where he had seen njovera, an extra-venereal syphilis of Southern Rhodesia. In the njovera area, an angular stomatitis, presumably

due to vitamin deficiency, was frequently labelled njovera by the native orderlies. The distinction between angular stomatitis and syphilitic lesions in the same site can only be made absolutely by means of the dark field, and he would value Dr. Hudson's views on that subject.

DR. G. M. FINDLAY said that everyone interested in endemic spirochaetal infections owed a debt to Dr. Hudson because of his insistence on the close relationship between all the various forms of treponematoses. It was, in fact, very difficult to draw a dividing line between bejel and yaws: they both had very similar manifestations which might involve the nose and the soles of the feet or the palms of the hands. Not very long ago in the middle of the 18th century there had existed a